DECISION

THE COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON, D.C. 20548

FILE: B-218566 **DATE:** August 15, 1985

MATTER OF: Cardion Electronics

DIGEST:

1. Protest that contracting agency received only two proposals and that this proves that the solicitation was unduly restrictive is denied. The agency, in fact, received initial proposals from more than two offerors and, in any case, the fact that even only one firm can comply with a specification does not indicate that a violation of the competitive procurement regulations has occurred if the specification requirement is reasonable and necessary.

2. Protest that specifications were unduly restrictive of competition is denied where record contains prima facie support that the capabilities required under the specifications were needed to meet the agency's minimum needs, including system capabilities permitting the government to satisfy potential requirements that may arise in the future, and the protester fails to meet its burden of showing that the requirements complained of are clearly unreasonable.

3. Protest that capabilities required by the specifications may be beyond the state of the art and involve severe risk for the contractor in developing, or probably cannot be developed within the schedule set forth in the solicitation is denied where protester fails to demonstrate by clear and convincing evidence that the specifications are, in fact, impossible to meet. The fact that meeting the specifications may involve some risk does not, of itself, render the solicitation improper, since some risk is inherent in most types of contracts and offerors are expected to allow for such risk in formulating their offers.

4. Protest that specifications are unduly restrictive and/or ambiguous is untimely where not filed until after the closing date for receipt of initial proposals. Protests based upon alleged improprieties in a solicitation which are apparent prior to the closing date for receipt of proposals must be filed prior to that closing date in order to be timely.

5. Protest that contracting agency, which had excluded the protester from the competitive range, was in the process of significantly relaxing a specification which the protester had alleged to be unduly restrictive is premature where the agency has neither amended the request for proposals clearly to relax the specification nor made award under the solicitation.

Cardion Electronics (Cardion) protests the terms of request for proposals No. DTFA01-85-R-06426, issued by the Federal Aviation Administration (FAA) for the supply and installation of an airport surface detection equipment (ASDE) system, also known as ASDE-3. Cardion alleges that the specifications are unduly restrictive of competition because they exceed the agency's minimum needs and are impossible to meet. We deny the protest.

FAA uses ASDE, an airport ground surveillance radar, to provide air traffic controllers with information on aircraft and vehicles, either stationary or moving, located on or near the surface of airport runways, taxiways and aprons. The current ASDE system, ASDE-2, is a vacuum-tube system which has been in operation for over 20 years. FAA indicates that ASDE-2 suffers from a serious maintenance problem as a result of tube failures and is nearly useless in heavy rain.

Accordingly, FAA undertook the development of specifications for an ASDE system capable of meeting its requirements for the next 20 years; a reliable system providing a clear, accurate and bright presentation of aircraft and vehicles at or near airport movement and holding areas under all weather and visibility conditions. With the participation of air traffic controllers from locations with the ASDE-2 system, FAA established the operational requirements for the new ASDE-3 system. Engineering personnel, who had participated in the development of an ASDE engineering prototype and had

conducted a survey of existing, off-the-shelf ASDE systems, translated these operational requirements into draft specifications. FAA then circulated the draft specifications to industry for comment. In November 1984, FAA issued the current, revised ASDE-3 specifications. These were incorporated into the solicitation issued shortly thereafter.

Shortly before the closing date for receipt of initial proposals, however, Cardion protested to FAA that the specifications were unduly restrictive. Although Cardion nevertheless submitted a proposal, it then filed this protest with our Office. Cardion's proposal subsequently was excluded from the competitive range as technically unacceptable.

Cardion alleges that the ASDE-3 specifications are unduly restrictive of competition because they either exceed FAA's minimum needs, "may be beyond the state of the art," or probably cannot be met within the delivery schedule set forth in the solicitation.

The determination of the government's minimum needs and the best method of accommodating those needs are primarily the responsibility of the contracting agencies. We have recognized that government procurement officials, since they are the ones most familiar with the conditions under which supplies, equipment or services have been used in the past and how they are to be used in the future, are generally in the best position to know the government's actual needs. Consequently, we will not question an agency's determination of its actual minimum needs unless there is a clear showing that the determination has no reasonable basis. Ray Service Company, B-217218, May 22, 1985, 64 Comp. Gen. ____, 85-1 C.P.D. ¶ 582.

When a protester challenges a specification as unduly restrictive of competition, the burden initially is on the procuring agency to establish prima facie support for its contention that the restrictions it imposes are needed to meet its minimum needs. But, once the agency establishes this prima facie support, the burden is then on the protester to show that the requirements complained of are clearly unreasonable. Ray Service Company, B-217218, supra.

We recognize that Cardion believes that FAA failed to obtain more than two proposals and that this proves that FAA issued unduly restrictive specifications and thus

failed to meet its obligation to foster competition. We have, however, previously held that if a specification requirement is reasonable and necessary, then the fact that even only one firm can comply with it does not indicate that a violation of the competitive procurement regulations has occurred. See Rolm Corporation, B-214052, Sept. 11, 1984, 84-2 C.P.D. ¶ 280. Moreover, we note that FAA, in fact, received proposals from more than two offerors. 1/ Accordingly, we must examine the specific portions of the specifications which Cardion alleges to be unduly restrictive.

Cardion first contends that the solicitation requirement that the ASDE-3 radar be capable of transmitting over a frequency range of 15.7 GHz to 17.7 GHz (Ku-band) exceeds FAA's minimum needs. Cardion argues that a radar capable of transmitting over a narrower frequency range, 15.7 GHz to 16.2 GHz, will satisfy FAA's needs and at the same time avoid the necessity for the costly and lengthy development process which Cardion believes will be required in order to produce a radar capable of transmitting over a broad, two GHz range.

Cardion alleges that a 15.7 GHz to 17.7 GHz frequency range is not required in order to avoid generating interference to or suffering interference from other communications and electronics equipment near ASDE-3 sites. Cardion cites a 1980 study, prepared for FAA, which concluded that an ASDE system restricted to the 15.7 GHz to 16.2 GHz range would not generate or suffer "uncontrollable" electromagnetic interference at 33 proposed ASDE sites since the electromagnetic emissions of ASDE and other equipment could, if necessary, be coordinated either as to frequency or time of emission. It notes that the prior 1982 draft specifications only required the transmitter to operate over the 15.7 GHz to 16.2 GHz range. Further, Cardion points out that the National Table of Frequency allocations recognizes use of the 15.7 GHz to 16.2 GHz range for ASDE. 2/ Thus, while the table indicates that government

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1/ Since this is a preaward protest, we will not further specify the number of offerors. See Federal Acquisition Regulation, § 15.413, 48 C.F.R. § 15.413 (1984).

2/ The National Table of Frequency Allocations is established by the National Telecommunications and Information Administration and is set forth in the Manual of Regulations and Procedures for Federal Radio Frequency Management (January 1985 ed.).

nonmilitary use of the 15.7 GHz to 17.7 GHz frequency range generally shall be secondary in priority to military use, it also indicates that use of the 15.7 GHz to 16.2 GHz range for ASDE is permitted on a coequal basis subject to coordination with the military.

Moreover, Cardion argues that even if use of the narrower frequency range would not eliminate the potential for interference at all sites, it would be less burdensome for FAA to require for each site only that narrow frequency range necessary in order to avoid interference at that site rather than to require the development of a single, broadband transmitter capable of avoiding interference at all sites.

FAA, however, contends that the flexibility of separate operating frequencies within the 15.7 GHz to 17.7 GHz frequency range is necessary in order significantly to reduce the potential for interference not only from current sources of electromagnetic emissions, but also from multiple ASDE's in the same area and from future enhancements to airport communications and surveillance equipment. In this regard, the agency notes that some airports will require more than one ASDE radar in order to assure complete coverage or are located near other ASDE airports, thus creating the potential for interference between multiple ASDE's in the same area.

In response, Cardion offers a different solution to the problem of multiple ASDE's. Cardion proposes synchronizing the frequency agility of each ASDE-3 radar--that is, the ability to change frequency between each pulse emission of the radar in order to improve its detection capability--so that the radars would at all times transmit at different frequencies. Cardion also proposes synchronizing the transmitter pulse time of each radar in order to avoid interference. Moreover, Cardion maintains that if a broader frequency range is required in order to provide for future enhancements to airport communications and surveillance equipment, then the specifications should have permitted offerors to propose as an option future expansions of the available frequency range rather than require the broader band now.

Cardion has failed to demonstrate that it was unreasonable for FAA to require that the ASDE-3 radar be capable of operating over a broad two GHz frequency range. We have no basis to question FAA's determination that a two

GHz range is necessary in order to avoid generating interference to or suffering interference from multiple ASDE-3 units in an area or future enhancements to airport communications and surveillance equipment. While the synchronization of emissions proposed by Cardion may in fact represent a viable solution to the problem of multiple ASDE's in an area, this does not establish that FAA was unreasonable in preferring a solution which also offered significant flexibility in dealing with future sources of electromagnetic interference. Cardion has not shown that the synchronization which it proposes would provide equivalent flexibility. We have previously held that an agency's minimum needs may properly include consideration of system capabilities that will permit the government to satisfy potential requirements that may arise in the future. See California Computer Products, Inc., B-193329, July 3, 1979, 79-2 C.P.D. ¶ 1; see also Cincinnati Bell Telephone Company, 62 Comp. Gen. 124 (1983), 83-1 C.P.D. ¶ 41.

In addition, we point out that not only FAA, but also two of the other offerors under the solicitation dispute Cardion's assertion that a costly and lengthy development process will be required in order to develop the capability of transmitting over a two GHz frequency range. We note that one of the offerors has informed us that a 1.5 GHz band, 15.7 GHz to 17.2 GHz, ASDE system is currently operational overseas.

Cardion also questions the specifications as they relate to the Remote Monitoring Subsystem (RMS) required by the solicitation. The ASDE RMS is one of several subsystems of the Remote Maintenance Monitoring System (RMMS) to be established at each FAA sector office. The specifications provide for this system continuously to monitor the operational status and performance of ASDE, selected environmental factors at the ASDE site and site security, and to transmit the resulting data to the central sector office. In particular, the specifications require the RMS to isolate 85 percent of all single failures in ASDE to the replaceable circuit board and/or module level with a confidence factor of at least 90 percent and to report the diagnosis to the sector office.

Although Cardion initially objected to the RMMS in general, the protester subsequently indicated that only the fault isolation/diagnostic function "presents a problem." Cardion argues that the requirement for remote isolation and diagnosis to the circuit board level exceeds FAA's minimum needs because ASDE-3 will be installed at major

airports likely to have permanently assigned to them FAA maintenance personnel and Cardion's ASDE system allegedly includes sufficient built-in test equipment and test points such that this resident maintenance staff can easily make on-site diagnoses of ASDE-3 using standard test equipment. Moreover, Cardion alleges that not only does no current ASDE system meet the FAA requirement for remote fault diagnosis, but that development of such a capability will necessitate a lengthy and costly program with "severe risk in the financial and schedule areas."

FAA, however, defends the specifications, arguing that a remote maintenance monitoring capability for new equipment is essential if the agency is to achieve its goal of meeting its facility maintenance requirement with a reduced workforce. FAA indicates that it plans to consolidate its maintenance functions at central maintenance hubs and that, therefore, all "ASDE-3 display locations" may not be manned by FAA maintenance personnel. We note that FAA's National Airspace System Plan for Facilities, Equipment and Associated Development (April 1984 ed.) includes remote maintenance monitoring in the measures proposed to enhance the safety, capacity, productivity and economy of the air traffic system. Moreover, FAA maintains that state-of-the-art digital display systems already have built-in performance and alarm monitoring features and can be readily adapted to meet the remote maintenance monitoring requirements of the specifications.

In response, Cardion argues that although FAA maintenance personnel may not man "ASDE-3 display locations," maintenance personnel at other locations at or near the airport will be available. In any case, Cardion questions whether it would be wise for FAA to remove maintenance personnel from ASDE-3 airports since this could result in the occasional loss of ASDE availability during the period after a potential problem is detected and prior to the arrival of maintenance personnel.

Cardion has failed to demonstrate that it was unreasonable for FAA to require remote maintenance monitoring, including remote diagnosis to the circuit board level. We have no basis to question FAA's determination that remote maintenance monitoring is a necessary part of its effort to reduce maintenance costs by consolidating its technical maintenance personnel at central maintenance hubs.

Cardion characterizes its protest in this regard as one against the need for remote maintenance monitoring "in

equipment when that equipment will not be deployed to remote sites," emphasizing that remote maintenance monitoring "is much more useful for remotely located equipments with high access costs." Cardion does not deny that remote maintenance monitoring would be of value in some circumstances; instead it argues that it is not needed here because ASDE will not be remotely deployed.

As indicated above, however, FAA has informed us that it cannot be assumed that all ASDE-3 locations will be staffed by FAA technical maintenance personnel since it plans to reduce its maintenance force and to concentrate that force in central maintenance hubs responsible for a variety of "widely dispersed equipment." Cardion's unsupported allegation that FAA maintenance personnel will, in fact, always be available in close proximity to ASDE equipment is thus insufficient to meet its burden of affirmatively proving its case in this regard. See Sunbelt Industries, Inc., B-214414.2, Jan. 29, 1985, 85-1 C.P.D. ¶ 113 (unsupported allegation insufficient to meet burden of affirmatively proving case).

Moreover, we believe that whether the anticipated cost-savings from centralizing maintenance personnel offset the risk of occasional periods when ASDE is unavailable raises a question which is more properly a question of policy than a question to be decided by our Office in connection with our bid protest function. Nevertheless, we note in this regard that the specifications require ASDE to have an inherent availability, i.e., operating as required except for allowed preventive maintenance, of at least 0.9996 and an operational availability, i.e., operating as required when all down time is counted as unavailability, of at least 0.998. This means that ASDE should be unavailable, on average, no more than approximately 3.5 hours per year due to any cause except preventive maintenance and no more than approximately 17.5 hours per year for any cause.

As for Cardion's allegation that development of the required remote maintenance monitoring will involve a "severe risk," we have previously held that even where the protester alleges that performance is impossible, we will not substitute our judgment for that of the agency in the absence of clear and convincing evidence that the specifications are in fact impossible to meet. ConDiesel Mobile Equipment Division, B-201568, Sept. 29, 1982, 82-2 C.P.D. ¶ 294. Cardion has not made the required showing. As indicated above, FAA maintains that state-of-the-art

digital display equipment can be readily adapted to supply the required remote maintenance monitoring capability. Further, one of the offerors contends that development of the required capability would involve no more than a "very small" percentage of the cost of the ASDE program. Finally, Cardion itself at one point proposed isolating a fault to within one of six modules.

Although development of a capability for remote maintenance monitoring may involve some risk, this does not, of itself, render the solicitation improper, since some risk is inherent in most types of contracts and offerors are expected to allow for such risk in formulating their offers. See Edward E. Davis Contracting, Inc., B-211886, Nov. 8, 1983, 83-2 C.P.D. ¶ 541.

Cardion further questions the specifications as they relate to certain required features of the Display Processor Subsystem. In particular, Cardion questions the specifications which (1) require the display subsystem to include the capability for the operator to select either a full screen display or a split-screen display in which the radar screen is divided into several display sections, including a large area of interest and at least two inserts or windows of designated subareas, (2) require that at locations where more than one radar is necessary in order to assure complete coverage, then the display subsystem must include the capability for the operator to choose to display data from the radars either on separate displays for each radar or on a single mosaiced display in which one radar generates part of the display and another radar generates another part of the display, (3) require that the operational video display be a high quality, high resolution display of 1,225 lines, and (4) require the contractor to provide a cartographic converter, in order to convert FAA maps into machine-readable data to be entered into the ASDE system, for use at the ASDE site or at a central map preparation facility.

Although Cardion admits that each of these features exists in some application, it maintains that no current ASDE system includes all of them. Further, it contends that developing a system which not only combines all of these features but also processes on a real-time basis the data generated by the ASDE radar will be technically risky at best and perhaps beyond the state-of-the-art. In any case, Cardion doubts that successful development of such a system can occur within the schedule set forth in the solicitation.

FAA explains that the required display features were selected in order to provide the flexibility and capability of handling airport traffic. It maintains that all of the features are readily available in current digital display technology. Although FAA admits that no current ASDE system includes all of these features, nevertheless, it asserts, based upon an extensive vendor survey, that the specifications are realistic.

Cardion's unsupported allegation that the required capability to process and to display on a real-time basis the data generated by the ASDE-3 radar cannot be developed within the solicitation schedule is insufficient to carry its burden of showing by clear and convincing evidence that the specifications are impossible to meet. Not only FAA, but also two of the other offerors consider the solicitation requirements realistic and within the state-of-the-art. See Hydro-Dredge Corporation, B-215873, Feb. 4, 1985, 85-1 C.P.D. ¶ 132 (in technical disputes, a protester's mere disagreement with the agency's technical opinion does not invalidate that opinion); cf. Polymembrane Systems, Incorporated--Reconsideration, B-213060.2, July 23, 1984, 84-2 C.P.D. ¶ 81 (in technical disputes, a protester's disagreement with the agency's opinion, even where the protester's position is supported by expert technical advice, does not invalidate the agency's opinion). Moreover, as we indicated above, even if there is some risk involved in development of the required capability, this does not, of itself, render the solicitation improper since some risk is inherent in most types of contracts and offerors are expected to allow for such risk when formulating their offers.

Cardion, however, also argues that FAA failed to demonstrate, in the administrative report responding to this protest, that the above display features were required in order to satisfy FAA's minimum needs.

Although FAA's explanation that the display features were required in order to provide the flexibility and capability necessary for handling airport traffic is not very elucidating, nevertheless, we believe that the record contains prima facie support for FAA's conclusion that the display features are needed to meet its minimum needs. Cf. Eastern Marine, Inc., B-213945, Mar. 23, 1984, 84-1 C.P.D. ¶ 343.

Prior to issuing the current specifications, FAA, with the participation of air traffic controllers from airports with ASDE-2 systems, set forth its operational requirements

in FAA order No. 7032.5 (February 28, 1984). That order, which Cardion assures us sets forth "reasonable performance requirements," indicated that in order for ASDE-3 to provide the required surveillance and assistance in expediting aircraft flow, the system must be capable of covering all movement areas, both existing and planned additions, and of displaying all aircraft and vehicles within this area. In order to provide this comprehensive level of coverage, the order recognized that multiple sensors with the capability of presenting all information on a common display, i.e., a mosaiced display, might be needed, and indicated that each display must have the capability of independent split-screen presentations with independent range scales. Further, the order also indicated that ASDE should have a high quality display that is clear of clutter, flicker free, well-defined, of sufficient contrast and brightness under all light conditions and of constant quality throughout the display area.

As for the specifications relating to map preparation, we note that the 1982 draft specifications, which Cardion claims provided the "basis for a reasonable competition," required the contractor to provide a system with the capability to construct a map at the ASDE site. The 1984 specifications, on the other hand, require that the cartographic converter "shall be provided for use at a central facility or with each installed facility." We note that after the cartographic data is converted into a digital format, it can be transported to the site by means of a floppy disk. This additional requirement for the capability to convert the FAA maps into a digital format at a central map preparation facility apparently results from FAA's previously mentioned plan to consolidate facilities in order to enhance productivity and economy.

Since Cardion has submitted no evidence that the specifications as they relate to these display features in fact exceeded the agency's minimum needs, we conclude that Cardion has failed to demonstrate that the requirements were unreasonable.

We emphasize that our conclusions as to the required frequency range, remote maintenance monitoring and display features in no way indicate that we have concluded that the ASDE-3 specifications are the most cost-effective, efficient means by which FAA can satisfy its requirement for an airport surface detection system. Rather, we merely hold that Cardion has not carried its burden of proving that the

specifications are defective under the procurement statutes and regulations for the reasons alleged by Cardion.

We note that Cardion, in its comments on the FAA's administrative report, alleges that other specifications are unduly restrictive and that a number of specifications are ambiguous. Since these allegations concern alleged improprieties in a solicitation which were apparent prior to the closing date but which the protester failed to protest until after the closing date, Cardion's protest is untimely as to these grounds. See Rapid America Corp., B-214664, Dec. 26, 1984, 84-2 C.P.D. ¶ 696.

Finally, in its latest submission to our Office, Cardion speculates that FAA is significantly relaxing its specifications as they relate to fault isolation and argues that this requires cancellation of the solicitation. Since, however, we are unaware of any amendment to the solicitation clearly relaxing the specifications in question and since FAA has yet not made award, much less an award on a proposal not conforming to the material requirements of the specifications, Cardion's allegation is premature. See also Triple P Services, Inc., B-217320, Jan. 12, 1985, 85-1 C.P.D. ¶ 11.

The protest is denied.

for Seymour Efros
Harry R. Van Cleve
General Counsel